

A NEW NEARCTIC SPECIES OF *HYADINA* (DIPTERA: EPHYDRIDAE)^{1,2}

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ABSTRACT: A new species of *Hyadina* is described, while the generic description and species key is modified for its inclusion.

Not long after completing a revision of the genus *Hyadina* for the Nearctic (Clausen, 1983), I received a number of specimens from the Canadian National Collections for identification. Contained therein were three specimens of a new species. Consequently, this paper should be considered as a supplement to the above revision.

Hyadina vockerothi n. sp.

It is with great pleasure that I name this species in honor of Dr. J.R. Vockeroth who collected the male specimens.

At this point, I should mention that this species contains the only brachypterous specimens of *Hyadina* known from the Nearctic Region. Of the three known specimens, one male has normal or nearly normal wings while the other male and the female are brachypterous. Unfortunately, with this small sample, I have no way of knowing the frequency of brachypterism, therefore I have designated the normal male as the holotype. The wing measurements for each specimen are listed separately in the following description.

Types: Holotype ♂ and paratype ♂, both from Cranberry I., Lockeport, Nova Scotia, 31-VII-1958, J.R. Vockeroth, mouse run among *Carex*; paratype ♀, Upper Rock L., 30 mi. N. Kingston, Ontario, VII-1977, J. Redner, ex. sphagnum bog; all three deposited in the Canadian National Collections.

Diagnosis: Wings with all crossveins dark brown to black; head with 2 pair of large, vertical setae (inners large and convergent, outers large and divergent), and 1 large pair, divergent, orbital setae; face laterally with dense black, velvety patch and medially with dense grayish to silvery pruinosity.

Description: MALE. Total body length 1.26 to 1.40 mm; shining black with grayish, silvery, golden, coppery and dense, black velvety pruinosity.

Head shining black with black, grayish, silvery, golden and coppery pruinosity; length 0.25 to 0.27 mm; 1 large pair divergent, orbital setae; 1 large pair convergent inner vertical setae; 1 large pair divergent outer vertical setae; vertex shining black, laterally with dense

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black, velvety pruinosity above and below, medially with coppery pruinosity above, becoming grayish to silvery below; gena black with dense black, velvety pruinosity above, dense grayish below. Face shining black, laterally with dense black, velvety patch, medially with dense grayish to silvery pruinosity; parafacial setae in 2 convergent and decumbent rows, 4 or 5 outers, 3 inners. Clypeus black with dense grayish to silvery pruinosity. Antennae black with copper pruinosity.

Thorax shining black with sparse golden to coppery pruinosity, no stripes or spots; scutum length 0.31 to 0.34 mm; dense grayish patch of humeral pruinosity; 1 large mesopleural seta. Scutellum shining black with sparse golden to coppery pruinosity medially, laterally with dense black, velvety patch; length 0.14 to 0.15 mm. Legs black with golden to coppery pruinosity; apex of mesothoracic tibiae with a large black spur and 2 small, black, anterior setae. Wing slightly clouded, not darkened at crossveins, no whitish spots, veins and all crossveins dark brown to black; R_{2+3} very short and angles upward sharply, meeting costs just beyond junction of R_1 and costa. Normal σ with wing rather short and broad, length from humeral crossvein 0.90 mm, width 0.48 mm, distance from h to R_1 0.14 mm, R_1 to R_{2+3} 0.09 mm, R_{2+3} to R_{4+5} 0.66 mm, R_{4+5} to M_{1+2} 0.12 mm, length R_{4+5} 0.66 mm, length M_{1+2} 0.44 mm, costal section from R_1 to R_{2+3} 0.13 times distance from R_{2+3} to R_{4+5} . Brachypterous σ with wing veins fused at crossveins, length from humeral crossvein 0.42 mm, width 0.22 mm, distance from h to R_1 0.10 mm, R_1 to R_{2+3} 0.07 mm, R_{2+3} to R_{4+5} 0.25 mm, R_{4+5} to M_{1+2} 0.10 mm, length R_{4+5} 0.29 mm, length M_{1+2} 0.12 mm, costal section from R_1 to R_{2+3} 0.27 times distance from R_{2+3} to R_{4+5} . Halteres light brown; normal in holotype σ , capitulum reduced in paratype σ .

Abdomen as in Fig. 1, shining brown with sparse golden to coppery pruinosity.

Genitalia (Fig. 2). Note narrow tergite 9 with very long, narrow surstyli with rounded, slightly broadened and flattened apices, each bearing several short setae; gonites rather long, narrow, curved, pointed apically; gonial arch incomplete; aedeagus large, long, abruptly curved near base, enlarged apically with striations.

FEMALE: Total body length 1.41 mm. Head, thorax and legs as in males except as noted:

Head length 0.27 mm; parafacial setae in 2 convergent and decumbent rows, except 2 outers proclinate, 5 outers, 4 inners.

Thorax with scutum length 0.31 mm, scutellum length 0.14 mm. Wing brachypterous, veins not fused at crossveins, length from humeral crossvein 0.53 mm, width 0.27 mm, distance from h to R_1 0.12 mm, R_1 to R_{2+3} 0.07 mm, R_{2+3} to R_{4+5} 0.32 mm, R_{4+5} to M_{1+2} 0.08 mm, length R_{4+5} 0.32 mm, length M_{1+2} 0.14 mm, costal section from R_1 to R_{2+3} 0.21 times distance from R_{2+3} to R_{4+5} . Halteres normal.

Abdomen as in Fig. 3, sternites 7 and 8 more strongly sclerotized and darker than others. Ventral receptacle as in Fig. 4.

Distribution. Nova Scotia and Ontario.

Specimens examined. 3 specimens (2 $\sigma\sigma$ and 1 ♀), the types with data as listed previously.

To include *vockerothi* in the genus *Hyadina*, some minor changes in the generic diagnosis and description (Clausen, 1983) are necessary. These are as follows:

Diagnosis and Description. Body length 1.26 to 2.30 mm. Head with face black, pruinosity uniform, striped or spotted, pruinosity grayish, silvery, golden, coppery or black; 1 large orbital seta or orbital setae very small. Wing with costal section from R_1 to R_{2+3} 0.13 to 1.25 times the distance from R_{2+3} to R_{4+5} .

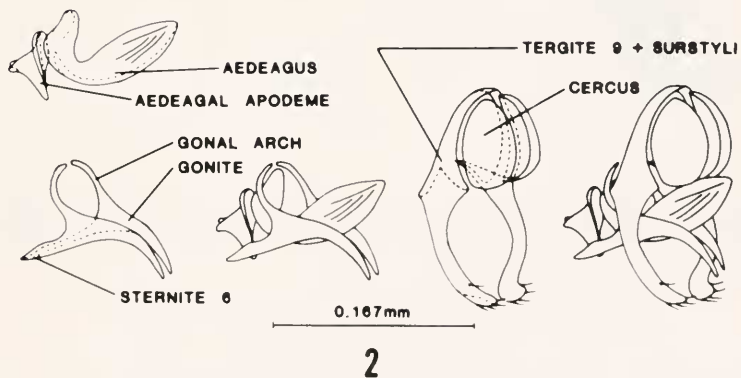
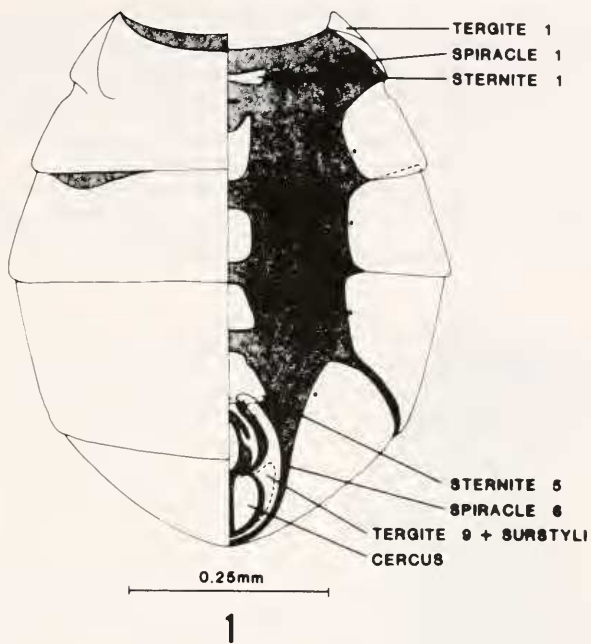


Fig. 1. Male abdomen, *Hyadina vockerothi* Clausen. Fig. 2. Male genitalia, *Hyadina vockerothi* Clausen.

The inclusion of *vockerothi* in *Hyadina* also necessitates the modification of the species key in Clausen (1983). The modifications are as follows:

4. Scutellum laterally with dense black, velvety patch 4A
 Scutellum without lateral, dense black, velvety patch, covered uniformly with golden to copper pruinosity *pruinosity* (Cresson)
- 4A. Face laterally with dense black, velvety patch and medially with dense grayish to silvery pruinosity; 1 large pair, divergent orbital setae *vockerothi* n. sp.
 Face with uniformly dense, grayish to golden pruinosity; 1 to 5 very small, orbital setae *binotata* (Cresson)

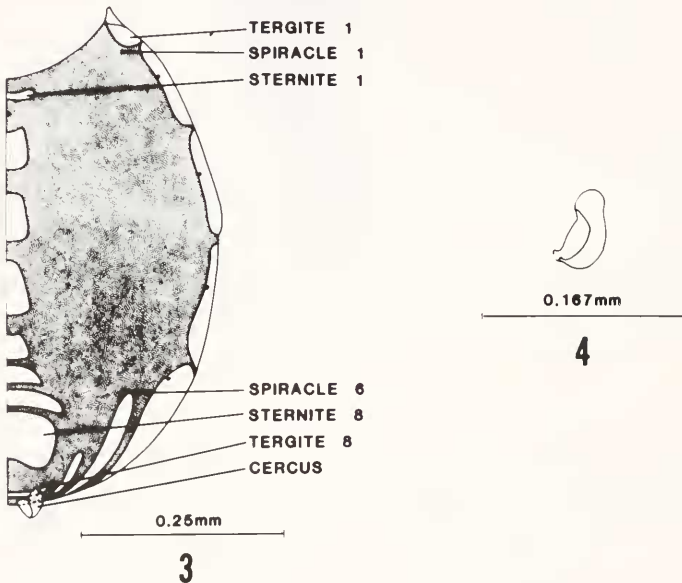


Fig. 3. Female abdomen, *Hyadina vockerothi* Clausen. Fig. 4. Ventral receptacle, *Hyadina vockerothi* Clausen.

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LITERATURE CITED

- Clausen, P.J. 1983. The genus *Hyadina* and a new genus of nearctic Ephydriidae (Diptera). *Trans. Am. Ent. Soc.* 109(2): 201-228.